

Chapter 7 System of Equations**Section 7.1: Developing Systems of Linear Equations**

Example 3: Create a linear system to model the following situations. Remember to identify your variables first.

- a) the sum of two numbers is 176 and their difference is 48
- b) The perimeter of a rectangle is 64 cm. Twice the width is 4 cm more than three times the length.
- c) Mr. Marzouk rented a car for 3 days and drove 160 km and was charged \$124 during Christmas break. He also rented the same car for 5 days and drove 400 km during Spring Break and was charged \$219.

Example 4: Create a linear system to model the following situations by using a table.

- a) The Andersons traveled 880 km from St. John's to Halifax. Part of their trip was by car traveling at an average speed of 80 km/hr, and the rest by ferry at 16 km/hr. The total traveling time for the entire trip was 27 hours.

	Speed	Time	Distance $d = S \times t$
Car			
Ferry			

Equations:

- b) In Burnaby, a school raised \$195 by collecting 3000 items for recycling. The school received 5 for each pop can and 20 for each large plastic bottle. The school collected 2700 pop cans and 300 plastic bottles. Use the linear system to verify these numbers.

	Refund per Item (\$)	Number of Items	Money Raised (\$)
Can			
Bottle			

Equations:

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